

What is claimed is:

1. A device to prevent superheating of a liquid within a microwave oven, said device comprising:
 - a transducer positionable on a surface within the microwave oven, wherein the surface supports a container for the liquid, said transducer responsive to a source of energy such that said transducer vibrates the surface thereby nucleating and allowing the liquid to boil such that the liquid is prevented from superheating.
2. The device in accordance with claim 1 wherein said transducer is capable of being energized by a source of energy powering the microwave oven.
3. The device in accordance with claim 1 wherein said transducer is capable of being energized by a pulsed impulse with sufficient amplitude to boil the liquid.
4. The device in accordance with claim 1 wherein said transducer operates at ultrasonic frequencies.

5. The device in accordance with claim 1 wherein said transducer is capable of being embedded within the surface of the microwave oven.

6. The device in accordance with claim 5 wherein said transducer is capable of being energized by a source of energy powering the microwave oven.

7. The device in accordance with claim 5 wherein said transducer is capable of being energized by a pulsed impulse with sufficient amplitude to boil the liquid.

8. The device in accordance with claim 5 wherein said transducer operates at ultrasonic frequencies.

9. A microwave oven comprising:

a support surface adapted to support a container within said microwave oven;

a transducer disposed on said support surface, said transducer responsive to a source of energy to vibrate said support surface such that any liquid within the container nucleates thereby allowing boiling to prevent the liquid from becoming superheated.

10. The microwave oven in accordance with claim 9 wherein the operation of said transducer is responsive to the operation of said microwave oven.

11. The microwave oven in accordance with claim 9 wherein the operation of said transducer is responsive to the operation of a timer.

12. The microwave oven in accordance with claim 9 wherein said transducer is embedded within said support surface.

13. The microwave oven in accordance with claim 12 wherein the operation of said transducer is responsive to the operation of said microwave oven.

14. The microwave oven in accordance with claim 12 wherein the operation of said transducer is responsive to the operation of a timer.

15. A method of preventing superheating of a liquid within a container, said method comprising the steps of:

generating a vibrational force;

transferring said vibrational force to said container;

generating sufficient amplitude from said vibrational force to cause nucleation for boiling of the liquid;

preventing the superheating of the liquid as a result of said boiling of the liquid.

16. The method in accordance with claim 15 wherein said vibrational force is generated by a pulsed impulse.

17. The method in accordance with claim 15 wherein said vibrational force is at an ultrasonic frequency.

18. The method in accordance with claim 15 wherein said step of generating a vibrational force is periodic.

19. The method in accordance with claim 15 wherein said step of generating a vibrational force is random.